

# International Residential Code

## 2012 to 2018 Key Changes

### 1.) R301.2 Wind Design Criteria and Wind Speed Maps

Ultimate design wind speed values replace basic wind speed values for 3-sec gust wind speeds in Section 301.2.1. A wind speed conversion table has been added for conversion from ultimate design to nominal design wind speeds.

TABLE R301.2.1.3  
WIND SPEED CONVERSIONS<sup>a</sup>

$V_{ult}$	110	115	120	130	140	150	160	170	180	190	200
$V_{nom}$	85	89	93	101	108	116	124	132	139	147	155

For SI: 1 mile per hour = 0.447 m/s.

a. Linear interpolation is permitted.

### 2.) Modification to Table R301.2(1) Climatic and Geographic Design Criteria

To assist the system designer, jurisdictions will now have to include variables for Manual J assessments with other climatic and geographic design criteria available from the building department.

### 3.) R301.2.1.1.1 Sunrooms

The 2015 IRC requires sunrooms to comply with AAMA/NPEA/NSA 2100-12. The standard contains requirements for habitable and nonhabitable sunrooms. Sunrooms should be identified as one of the five categories in the construction documents and designed accordingly.

### 4.) Mechanical ventilation IS NOT mandatory for all new home construction in Georgia as the following section of the IRC was amended in Georgia R303.4

Mechanical ventilation. Where the air infiltration rate of a dwelling unit is 5 3 air changes per hour or less where tested with a blower door at a pressure of 0.2 inch w.c (50 Pa) in accordance with Section N1102.4.1.2, the dwelling unit shall be provided with whole-house mechanical ventilation in accordance with Section M1505 .4.

### 5.) R304.1 Minimum Habitable Room Area

Currently with a 2018 Georgia Amendment addressing the issue, the requirement for one habitable room with a minimum floor area of 120 square feet has been changed to require habitable room floor areas of not less than 70 square feet.

### 6.) R305 Ceiling Height

The minimum ceiling height for bathrooms, toilet rooms, and laundry rooms has been reduced from 7 feet to 6 feet, 8 inches.

### 7.) R325.6, R202 Habitable Attics

The definition and technical requirements of habitable attic has been revised and clarifies, that a habitable attic, even if unfinished, is a habitable space.

### 8.) R404.4 Retaining Walls

Retaining walls that are not laterally supported at the top and that retain in excess of 48 inches of unbalanced fill, or retaining walls exceeding 24 inches in height that resist lateral loads in addition to soil , shall be designed by accepted engineering practice to ensure stability against overturning.

### 9.) R408.3 Unvented crawl space

V entilation of the under-floor space is not required when an appropriately-sized dehumidifier is provided in combination with the Class 1 vapor retarder requirements.

## 10.) Tables R502.3.1(1), R502.3.1(2) Floor Joist Spans for Common Lumber Species

The allowable spans for some grades of Southern Yellow Pine have been reduced. Many of these changes are reflected in the current Georgia Amendments to the IRC. For example, SP #2, 2x10's at 16" o.c with a dead load of 10 psf could span 18'-0" in 2012, and have now been reduced to an allowable span of 15'-8".

The same will be true for other span tables in the code.

**11.) Prescriptive Deck Details Design Document was not brought forward with the 2018 IRC Georgia Amendments.** The 2018 IRC reorganized R507 Decks which incorporated many of the more useful illustrations and provisions to simplify the prescriptive construction of a deck. R507 is now much clearer in regards to deck materials, deck footing, joist spacing and spans, and fastener requirements.



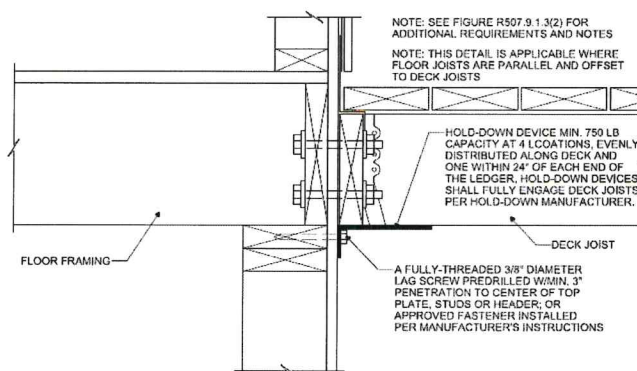
## 12.) R507.4 Deck Posts and R507.4.1 Deck post to deck footing connection

Minimum sizes of wood posts supporting decks have been established as well as requirements for connections of the deck posts to the footings.

**13.) There are some Georgia Amendments that provide even more clarity and allow the use of other approved fasteners in ledger to band joist connections as opposed to thru-bolting.** R507.9.1.3 Ledger to band joist details. Fasteners used in deck ledger connections, in accordance with Table R507.9.1.3(1), shall be hot-dipped galvanized, or stainless steel, or other approved fasteners, and shall be installed in accordance with Table R507.9.1.3(2) and Figures R507.9.1.3(1) and R507.9.1.3(2)

## 14.) R507.9.2 Lateral Connection

Four smaller hold-down tension devices with 750 lb. capacity can now be utilized as an alternative to the larger 1,500 lb. capacity tension devices.





**15.) Modification to Table R602.7.5 Support for Headers**

The full height stud table has been significantly altered. The table increases the number of king studs in higher wind regions and requires only one or two king studs at each end of a header in regions with 115 mph wind speeds.

**16.) Georgia is bringing back a requirement that was previously an amendment to the 2006 IRC, which will now require attics containing appliances to be accessible by pull down stairs or other permanent stairs. R807.1.1 Attic service access.** Attics containing appliances or mechanical equipment service shall be accessible by pull down stairs or other permanent steps and at a minimum be sized to allow the removal of the largest appliance.

**17.) M1502.4.4 Dryer exhaust duct power ventilators**

The use of duct-power ventilators for dryer exhaust has been added into the code which can allow the maximum allowable exhaust length to exceed 35 feet when installed.

**18.) Modification to M1503.6 Makeup Air for Kitchen Exhaust Systems**

Makeup air, for domestic cooking exhaust systems, is no longer required if all fuel-burning appliances in the dwelling unit have a direct vent or mechanical draft vent system.

**19.) Modification to G2406.2**

A gas-fired clothes dryer is now allowed to be installed in a bathroom or toilet room, where a permanent opening communicates with other permitted spaces.

**20.) Appendix Q** was added to the 2018 IRC and covers the provisions for tiny houses, with a maximum floor area of 400 square feet. A similar Appendix for Tiny Houses was already adopted in Georgia, and our version will be brought forward as an amendment.

## **INTERNATIONAL BUILDING CODE**

### **2012 TO 2018 KEY CHANGES**

- 1. 503.1, 706.1 Fire wall separation of buildings.** Previously, the code required all buildings to be considered independent and separate from other portions of the structure when a fire wall was present. This often required the buildings on either side of the fire wall to be provided with independent means of egress, separate utilities, individual addresses, and self-contained life safety systems. This change now clarifies that the fire wall is only provided to ensure that the portions of the building separated by the fire wall is to solely limit the height and area of the building into individual compartments that do not exceed the limitations established by the code.
- 2. Table 504.3 Allowable Building Height in Feet Above Grade Plane, Table 504.4 Allowable Number of Stories Above Grade Plane and Table 506.2 Allowable area Factor in Square Feet.** The requirements for allowable building height, story and area are now separated into three different tables, but the technical application is unchanged. The three tables also incorporate sprinkler increases for the height and areas which were calculated separately in earlier versions of the code.
- 3. Table 504.4 Allowable Number of Stories Above Grade Plane.** Revised for the number of stories allowed for Occupancy Classification "I-1 Condition 2". A new footnote "i" was also added that reads "i. For all I-1 Condition 2, the building shall be protected throughout with an approved automatic sprinkler system, installed in accordance with NFPA 13 as adopted by the Rules and Regulations of the Safety Fire Commissioner. No increase in story height shall be permitted." (GA amendment)

4. **510.2 Horizontal building separation allowance.** Vertical Offset in Pedestal Buildings. Change revises the option for pedestal buildings allowing a vertical off-sets in pedestal buildings if the fire-resistance rating of the vertical offset is not less than 3 hours.
5. **713.14.1 Designated floor lobbies for elevator return.** Revised to clarify this amendment applies only when elevator lobbies are required on designated floors for elevator return. (GA amendment)
6. **[F] 903.2.8 Group R. Revised to add a new Exception:** Group R-1 and R-2 occupancies which meet the exceptions allowed by the "Rules and Regulations of the Safety Fire Commissioner Chapter 120-3-3 Rules and Regulations for the State Minimum Fire Safety Standards" are exempt from this requirement. (GA amendment)
7. **[F] 903.2.8.1 Group R-3.** An automatic sprinkler system installed in accordance with Section 903-3.3.1.3 (NFPA13D) was changed to read "with 903.3.1.2 (NFPA 13R) shall be permitted in Group R-3 occupancies." (GA amendment)
8. **[F] 903.2.8.2 Group R-4, Condition 1.** An automatic sprinkler system installed in accordance with Section 903.3.1.3 (NFPA 13 D) was changed to read "with 903.3.1.2 (NFPA 13R) shall be permitted in Group R-4, Condition 1 occupancies." (GA amendment)
9. **[F] 903.2.8.4 Care facilities.** An automatic sprinkler system installed in accordance with Section 903.3.1.3 (NFPA 13D) was changed to with 903.3.1.2 (NFPA 13 R) shall be permitted in care facilities with five or fewer individuals in a single-family dwelling. (GA amendment)
10. **[F] 903.3.1.3 NFPA 13D sprinkler systems.** Automatic sprinkler systems installed in one- and two-family dwellings; Group R-3; Group R 4, Condition 1; and townhouses separated by 2 hour firewalls shall be permitted to be installed throughout in accordance with NFPA 13D. (GA amendment)
11. **Table 1005.4 Maximum Floor Area Allowances Per Occupant.** The occupant load factor for business use has been revised from 100 to 150 square feet per occupant. Also added new category for "concentrated business use areas" added referring to Sec. 1004.8.
12. **1607.15.2 Fire walls.** In order to meet the structural stability of Section 706.2 where the structure on either side of the wall has collapsed, fire walls and their supports shall be designed to withstand a minimum allowable horizontal stress of 5 pounds per square foot for stability (per NFPA 221).
13. **1704.2 Special inspections and tests.** Revised to state, these inspections are in addition to the inspections by the building official identified in Section 110. The first exception was also revised to read "Special inspections are not required for construction of a minor nature that does not require the practice of professional engineering or architecture, as defined by Georgia statutes and regulations governing the professional registration and certification of engineers or architects or as warranted by conditions in the jurisdiction as approved by the building official." (GA Amendment)



14. **Table 1704.2 Minimum Special Inspector Qualifications.** Revised to require concrete strength testing must be performed by an American Concrete Institute (ACI) Strength Testing Technician. (GA amendment)
15. **Table 1810.3.2.6 Allowable Stresses for Materials Used in Deep Foundation Elements.** Revised under Item 4. Other conditions, to read:  
-For load combinations not including wind or seismic loads -  $0.5 f_y \leq 30,000$  psi  
-For load combinations including wind or seismic loads -  $0.5 f_y \leq 40,000$  psi (GA amendment)
16. **3005.4 Machine rooms, control rooms, machinery spaces and control spaces.** These spaces must be enclosed with fire barriers or horizontal assemblies, with a fire-resistance-rating not less than 2 hours. Exception: When sprinklers and a shunt trip breaker are installed. (GA amendment)
17. **3408.2.1 Assisted living communities.** Existing buildings or portions of buildings proposed as a change of occupancy to Assisted Living Communities, licensed by the State, housing twenty-five or more persons, shall be allowed to meet the Georgia State Fire Marshal's Office Life Safety Code requirements for primary equivalent compliance to the International Building Code Chapters 3, 4, 8, 9, and 10. (GA amendment)
18. **Chapter 34 Reserved.** Changed to read "Existing Buildings" and all the provisions from Chapter 34 "Existing Buildings" of the 2012 IBC were carried forward to the 2018 IBC. (GA amendment)
19. **3401.7 Existing systems conformance.** The 50% rule for the extent to which the existing systems are made to conform to the code requirements for new construction was clarified to state these requirements specifically apply to mechanical, electrical, plumbing and life safety systems. (GA amendment)
20. **Appendix O Disaster Resilient Construction.** Adopted by the Department as optional. This document can be downloaded at <https://dca.ga.gov/local-government-assistance/construction-codes-industrialized-buildings/construction-codes>. (GA amendment)